

WHAT IS CLAIMED IS:

1. A network system for transceiving various wireless network signals comprising:

at least one wireless network signal transceiver operable to receive wireless packet messages sent from one of a variety of electronic devices having a wireless network adapter with a unique wireless communication protocol installed therein;

a router; and

a wire connection for coupling said router to said wireless network signal transceiver and coupling said router to Internet respectively;

wherein said wireless network signal transceiver determines said wireless communication protocol while reading said received wireless packet messages, decodes said wireless packet messages based on said associated wireless communication protocol, converts said same into wire packet messages having formats acceptable to said wire connection, sends said wire packet messages to said Internet through said wire connection and said router for effecting an exchange of packet message, receives said wire packet messages from said Internet through said wire connection, performs a respective conversion and encoding on said wire packet messages based on encoding rules of a variety of wireless network communication protocols stored therein, and transmits sequentially said encoded and converted wireless packet messages to said wireless network adapters.

2. The network system of claim 1, wherein said wireless network signal transceiver comprises:

a wireless signal transceiver module for receiving said wireless packet messages sent from said wireless network adapters;

a plurality of wireless network interfaces each incorporating one of said

wireless network communication protocols and coupled to said wireless signal transceiver module for receiving said wireless packet messages sent from said wireless signal transceiver module based on said incorporated said wireless network communication protocol;

5 a memory for storing rules of said wireless network communication protocols and network applications;

a central processing unit (CPU) for controlling said wireless network signal transceivers and decoding said received wireless packet messages based on said stored rules of said wireless network communication protocols; and

10 a wire connection interface for performing a routing, a bridging, a route selection, and a net address transfer (NAT) on said received wireless packet messages based on said network applications stored in said memory, converting said received wireless packet messages into said wire packet messages acceptable to said wire connection, and transmitting said same to said Internet through said wire connection and said router.

15 3. The network system of claim 2, wherein each of said wireless network interfaces is operable to determine said wireless communication protocol used in transmitting said wireless packet messages, and delete said wireless packet messages if said determined wireless communication protocol is not one of said
20 wireless network communication protocols or receive said wireless packet messages, and said CPU is operable to decode said wireless packet messages based on said wireless communication protocol used by said wireless packet messages and said rules of said wireless network communication protocols stored in said memory.

25 4. The network system of any of claims 1 to 3, wherein each of said wireless network communication protocols is an IEEE 802.11B, a bluetooth, or a home RF technique.